DOCUMENT RESUME

ED 188 787 PS 011 585

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TITLE The Economic Impact of Subsidized Child Care: An Economic Analysis of Valley Child Care from November 1976 to June 1979.
INSTITUTION Freis & Miller & Assoc., Livermore, Calif.
PUB DATE 80
NOTE 24p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Day Care Centers: Economic Research: *Economic Status: Employed Parents: Family Income: Longitudinal Studies: *Program Costs: *Program Effectiveness: State Aid: Taxes: Welfare Recipients
IDENTIFIERS California

ABSTRACT

This study examines the specific economic impact on the cost to government of subsidized child care and development services. Data were collected from all 295 families who used Valley Child Care services for more than six months, over a period of two and a half years. The data and results indicated significant economic effects of providing subsidized services. A comparison of government expenditures and revenues between the time families entered the program and the time they left showed that public assistance costs were reduced by almost half and income tax and sales tax revenues were increased by 63%. Over the entire study period: (1) the cumulative increase in family income was close to a quarter of a million dollars: (2) the monthly average income of each family and the monthly average taxes paid increased in almost direct proportion to the length of time in the program: (3) total parent fees paid for child care (based on income) increased by 65%: and the total public funding was offset by 44.5%. Eighty-four percent of families who were eligible for subsidy on the basis of seeking employment were successful in finding jobs. (Author/SS)

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THE ECONOMIC IMPACT OF SUBSIDIZED CHILD CARE

AN ECONOMIC ANALYSIS OF VALLEY CHILD CARE

From November 1976 to June 1979

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1980

PS011585

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THE ECONOMIC IMPACT OF SUBSIDIZED CHILD CARE

Freis and Miller and Associates

I. SUMMARY

The time has come to look at the specific economic impact on the cost to government of subsidized child care and development services. Consequently, Valley Child Care undertook an economic study of all 295 families who used its child care services for more than six months, over a period of two and a half years.

The data and results reported in this paper show significant economic effects of providing subsidized services.

A. A comparison between the time families entered the program and when they left shows that:

1. Public assistance costs were reduced by almost half.
2. Income and sales tax revenues were increased by 63%.
3. Total parent fees paid increased by 65% over the two and a half years of the program.

B. Over the entire study period:

1. The cumulative increase in family income was close to a quarter of a million dollars.
2. The monthly <u>average</u> income of each family and the monthly <u>average</u> taxes paid increased in almost direct proportion to the length of time in the program.
3. The total public funding was offset by 44.5%. Of this, 17.5% was from increased taxes, increased parent fees, and decreased public assistance costs directly associated with the 295 families. An

additional 27.0% resulted from(a) taxes estimated using an employment multiplier obtained from EDD applied to the 64 new jobs found by the families, and(b) the taxes paid by the 58 new direct child care services jobs together with the employment multiplier for these jobs.

C. Eighty-four percent of families who were eligible for subsidy on the basis of seeking employment were successful in finding jobs.

Valley Child Care's program is oriented toward serving working families. It is expected child care programs with similar eligibility requirements would have comparable results, no matter where they are located or what type of delivery system was used.

II. INTRODUCTION

There has been tremendous increase in the number of working women and in the rate of inflation in the last five years. This has changed the nature of the child care debate over need. Most policy makers now acknowledge the need for subsidized child care services. Decisions today are based on where to put limited public dollars first. Analysis of the economic outcomes for families would be useful in making those decisions.

The purpose of this report is to help bridge the gap between policy makers and their advisors, and the practitioners in the field. In part this paper came out of a notion that although economic self-sufficiency is a goal of state subsidized child care programs in California,[1] few, in fact, have looked at the economic changes in the lives of families receiving these services. There was also a growing awareness by the authors that almost every state subsidized program in California is required by law to obtain and keep verified information about the changes in the economic status of the families they serve. Consequently, practitioners in the field had access to data that could demonstrate the economic impact of subsidized child care.

The authors believe that the results of this study are <u>not</u> related to this particular delivery system for child care services, or whether these services are locally, state, or federally funded, because the economic impact on families is not related to how their child care is paid for.

Almost all interest to date has been focused on changes that take place for a child receiving a particular service. This

paper looks at what happened to affect economic self-sufficiency of the family and what were the offsets to public expense for 295 families utilizing subsidized child care services during a 2½ year period.

III. REVIEW OF THE LITERATURE

A review of the literature provides sparse results on the economic outcomes for families in subsidized child care programs.

Studies by Ditman and Prosser in 1973,[2] Shaw,[3] Heckman,[4] Husby[5] in 1974, and Kurz, Robbins and Spiegelman in 1975[6] looked at the effect that provision of child care services had on the number of women on welfare entering the labor force. They found that it was not child care that encouraged women to enter the labor market, but factors such as favorable job markets and the prospect of higher earnings that made the difference. Shortlidge[7] concluded in 1976 that free child care would have the greatest effect on women who are only marginally out of the labor force.

Several of the above studies[2,4,5] found that the cost benefit of providing child care was not sufficient to balance the cost of welfare. Kamerman and Kahn[8] said that comparing the cost of welfare with child care may not be reason enough to encourage women on AFDC to become employed. Rather, they suggest that there are more important long-term effects such as the development of skills, habits and attitudes of a working adult.

Hess[9], in an unpublished Masters Thesis (1978), did one of the first studies that looked at the effect of subsidized child care in assisting families to gain economic independence. He found that of parents who began the program on AFDC, 54.5% got off because

they became employed and an additional 32.2% left because they were going to school full time. His findings also showed that there was a substantial increase in the mean monthly income for parents who used the program over two years, and that the amount of increase in family income was higher for families using care for their school age children.

Hosni's[10] study in 1979 looked at the outcomes for low income families who were working or in training. They reported a 44.7% drop in AFDC payments due to employment and increases in earned income. They found that most working families who left the program because of elegibility requirements stayed in the labor market and did not return to welfare. They also found that the longer the enrollment, the higher was the incidence of termination from AFDC. Mean earned income increased 116.8% over the study period.

Prosser[11] in 1972 discusses the effect of day care expenditures. He says that "Federal expenditure in day care can support 1½ to twice as many jobs as would result from a tax cut of similar size" and would be less inflationary than most programs that create jobs.

While Hess and Hosni looked at increases in income and decreases in AFDC, the eligibility limitations of these programs did not make it possible to adequately compare the effect of subsidy over time. Moreover, none of the studies examined the dollar offsets. While Prosser described the new jobs multiplier, he did not discuss the tax impact associated with those jobs.

IV. METHODS

A. Description of Program

Valley Child Care is a private non-profit corporation providing services for children and their families. The California State Department of Education, Office

of Child Development contracts with Valley Child Care to provide resource and referral services and a vendor payment child care subsidy system in the Livermore-Amador Valley, serving three contiguous communities covering 225 square miles.

Through the vendor payment system parents choose a child care center or a licensed family child care home that meets their needs. Valley Child Care pays for the care at the same rate that is charged to the general community.

In addition to subsidies, Valley Child Care provides technical assistance, training, and a variety of support services to providers of child care as well as to parents.

Included in these services are: respite care for providers on a regular basis, a toy and equipment lending library, a food subsidy program, counseling, workshops on current topics related to child growth and development and The Parents Place, a parenting center available to the entire community. Finally, Valley Child Care administers nutrition, mainstreaming, and child care training projects.

Families are eligible for a state subsidy based on need and income as established in 1976 legislation. First priority goes to children in need of Protective Service due to child abuse and neglect. The next priority is for families of lowest income who are working followed

by those in job training or in school. Next priority is given to families seeking employment.

B. Selection of Families

All families were included in the study if they:

1. were in the program at some time between its opening in November 1976, and June 30, 1979, and
2. had both an initial certification of their eligibility and verification of income and at least one six month recertification.

Four hundred ninety-eight families entered the program from November, 1976, to June 30, 1979. Of these, 142 terminated before the required six month recertification and 61 had not been in the program long enough on June 30, 1979 to recertify. The remaining 295 families constituted the population of this study.

C. Data Collection

Information on each family was taken directly from the combined form for Application for Child Development Services and Certification of Eligibility that is required by the Office of Child Development, State Department of Education.

General information items were recorded such as dates of program entry and exit, marital status, number of children, whether child care services were used at night or on weekends, and in the case of single parents, whether child support was received.

A brief description of these subsidized families shows that 83% are single parents. Seventy-five percent have no more than two children.* Ten percent of the families receive public assistance either because their employment income is very low or because they are looking for work. Ten percent of the families use child care during non-standard hours because they work nights or weekends.

The following information was tabulated:

1. Gross Income

   The amount of gross income was recorded for each family at entry and for each of the six month recertification periods, starting 1/77 and ending 6/79.

   Recertification is required either every six months or when income changes, whichever is sooner. Since some families have frequent income changes, the income closest to the next six-month period was used. Consequently, the income used for 6/77, for example, would cover that reported between 4/1/77 and 9/30/77.

   Gross income includes income from employment, welfare, child support, alimony, social security, unemployment, pensions, dividends, and worker's compensation. Each item was substantiated by pay stubs or other appropriate documentation retained by Valley Child Care.

*It is interesting to note that only 29% of these single parents receive child support payments.

2. Public Assistance

Public assistance income was included in gross income, and was also recorded separately for each certification period in order to track the changes over time.

3. Taxable Income

Taxable income for each family was defined as gross income minus any income from public assistance, child support, alimony, disability, and unemployment. These sources are not taxable and, therefore, were not included in the analysis of taxable income. The amount of taxable income was taken directly from the application and recertification form.

D. Data Calculation

The data collected as described above were treated as follows:

1. Changes Between Entrance and Exit from Program

a. Public Assistance Decreases

For each family, the grant from public assistance was recorded at the entry into the program and compared with the grant from welfare recorded at the last recertification period. The total initial grants and the total final grants were summed across all the families and the percent of decrease from the total initial grants was then calculated.

b. Income Tax Increases

The State and Federal income taxes were calculated as above for welfare. By taking the

annualized taxable income at entry and exit, and the number of exemptions, the increase or decrease in Federal and State income taxes was calculated for each of the 295 families. This value was divided by two to correspond to the six-month recertification period. The 1978 tax tables were used because 1978 was the middle year.

c. Parent Fee Increases

The California State Department of Education requires that parents pay a share of the program cost using a sliding scale specified by the state. A family fee is based on the gross family income and family size. The family fee is paid for one child only no matter how many children are in care. Since the family fee scale is adjusted annually by the state for inflation, the middle year fee (1978/79) scale was used. The increase in family fee paid was determined by calculating the difference in fees between entrance and exit for each family. The fee increases per family were then summed over all the families and the percent increase was calculated.

2. Overall (Cumulative) Increases or Decreases from Payments at Entry (see Appendix for mathematical details)

a. State and Federal Income Taxes

The taxes paid by each family were calculated for each recertification period on an annualized basis and divided by two to correspond to the

six-month recertification period. The amount of taxes paid at entry on a six-month basis was subtracted from each six-month's period to obtain the increase in taxes paid for that six-month period. These values were summed over all the recertification periods, with less than six-month periods calculated as the appropriate fraction of the previous period's value. The resulting cumulative increase in taxes per family was then summed over all families to get the total cumulative increase.

b. Gross Income, Parent Fee Income, and Welfare Income

The increase (or decrease) in these sources of income were calculated as in (a).

c. Sales Tax

The increase in total sales tax was calculated by using under $10,000 as the average family income and three persons as the average family size. The rate of .017 from the California sales tax chart in the 1978 state income tax instructions was applied to the gross income increase calculated in (b) above to obtain the total sales tax.

3. Average Increases Per Month for Income Taxes and Gross Income

In order to compare the increase in taxes paid or the increase in gross income with the length of time in the program, the cumulative value of taxes

or income for each family was divided by their number of months in the program. The result was the average increase per month per family. Following that, the families were placed into five groups, corresponding to 0 to 6 months in the program, 7 to 12 months, 13 to 18 months, 19 to 24 months, and over 25 months. For each time interval, the average increase per month per family was averaged for the whole group to obtain the average increase per month for those families staying in the program for that time interval.

4. The Cumulative Offset

   a. Costs

      The total cost of the 498 families over the 2½ years studied was the sum of the state funding during that period. The cost for the 295 families studied were calculated by assuming that the 203 families not included had the same distribution of income, welfare, taxes, and fees as the 295 of the study group. The average time in the program for the 203 families was three months and for the 295 was 14.57 months. Consequently, the 295 study families were 87.6% of the total family months, and, therefore, 87.6% of the total costs.

   b. Offsets

      The state cost for the program was offset by the State and Federal income tax increase (see 2., a), the welfare decrease (see 2., b), the sales tax increase (see 2., c), and the

parent fee increase (see 2., b).

Additional offsets are provided through the additional new jobs that were created in the community. These are:

1) 34 families who went off public assistance because they found jobs.

2) 30 families entered program to seek employment and found jobs.

3) 58 new child care jobs needed to serve subsidized families. These include only Valley Child Care staff (7) and newly established family child care homes (51).

The direct offsets from the first two are described in the paragraph above. There are also direct offsets from number three. These were obtained from the actual income taxes paid by Valley Child Care employees with an estimate of their sales taxes, and from the taxes estimated for the child care home jobs using the average income from the June, 1977 Survey on Current Business for Alameda County. The 1976 figures in that report were adjusted by 27.7% for inflation between 1976 and 1979.

The Federal and State Income and Sales Tax were computed by using the income tax tables.

In addition, according to the State Department of Employment Development, 1.75 new indirect jobs are created for each additional person employed in a community. By using this multiplier on the 122 direct jobs, 214 indirect

jobs were created. Their incomes and taxes were based on the Survey of Current Business noted above. A one year length of employment was assumed for the 34 families who went off public assistance, the 30 families who found new jobs and the associated indirect jobs. The length of employment for the child care jobs and the indirect jobs associated with their employment was assumed to be 2½ years of the study period.

c. Percent Offset

The percent by which the state cost was offset was equal to the sum of the items in 4., b, divided by the costs in 4., a.

V. RESULTS

A. Changes Between Entrance and Exit

1. Families on Welfare

During the 2½ years between entrance and exit, the cost of public assistance grants for families was reduced by close to 50%. Ten percent, or 31 families, were receiving public assistance when they entered the program. If these families had continued to receive the same level of public assistance during the months they were in the program rather than obtain employment, it would have cost the state $165,100. However, because these families were working, the state cost for public assistance for these families was only $87,736. This is a savings of $77,363 or 47% to the taxpayers.

Sixty-eight percent of the families receiving public assistance no longer needed it because they obtained employment. Almost all of the remaining families received a reduced grant because they now had some work related income.

2. Income Taxes

Between the time families entered and left the program they paid an increase of 63% in State and Federal income taxes. This increase was a result of the increased income they were able to earn. By the end of their stay, 55% or 163 families were paying more taxes. Forty of these families entered the program paying no taxes at all.

3. Parent Fees for Child Care Services

Between entrance and exit from the program, the amount of parent fees had been increased by 65%. This increase reflected the increased income earned by the families because parent fees are based on income.

B. Overall (Cumulative) Changes

1. State and Federal Income Taxes

During the period of the study, the cumulative amount of State and Federal income taxes increased by $37,487 over the amount paid initially. This represents tax dollars that were previously not available to the government. It is likely that this tax revenue would be lost if subsidized services had not been available.

2. Gross Income

The cumulative increase in family income was $241,000. Since families on the lower end of the financial range must necessarily spend almost all of their income, this money becomes part of the income for businesses in the community. These businesses then pay higher taxes on their increased income. The result is what might be called the "trickle up" theory and could play a significant part in the economic health of the state.

3. Parent Fees

The cumulative increase in parent fees over the period of the study was $44,617. The fact that family income increased meant that families were able to pay an increased percentage of the cost of their child care services rather than the state continuing to carry the whole financial burden.

4. Sales Taxes

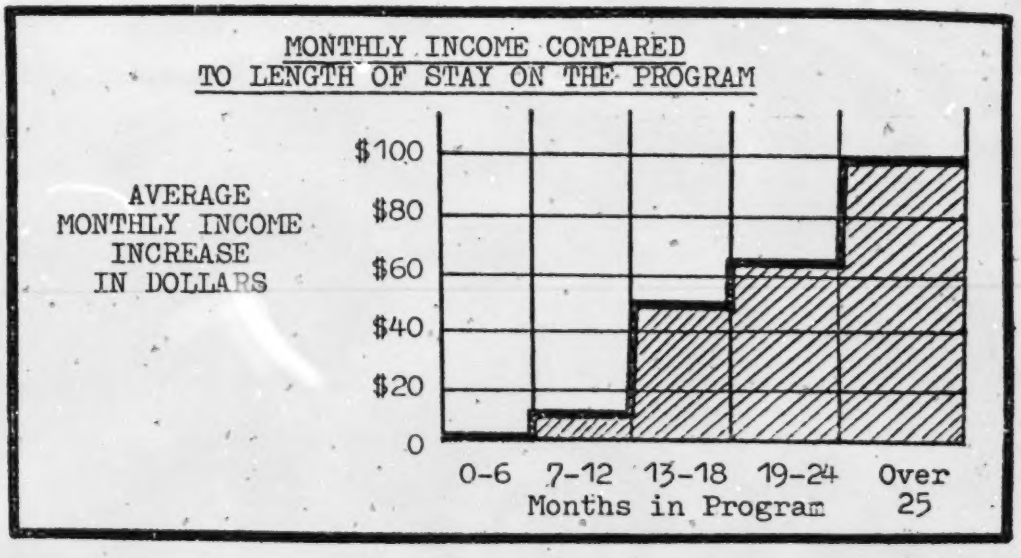
Sales tax revenue to the state was increased by $4,100 over the period of the study. These taxes, which were previously not available, were the result of the increased income because these families were employed.

C. Effect of Length of Stay in the Program

1. One of the most significant and interesting results of this study was the relationship between the monthly average increase in income and the number of months that families remained in the program.

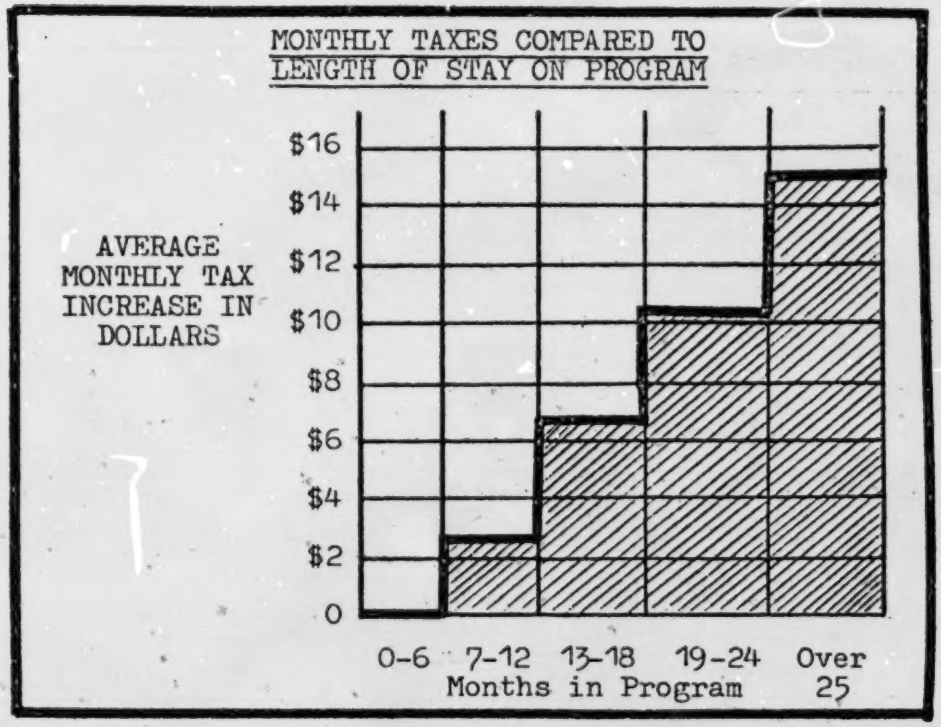
The average monthly income increased six-and-a-half times for families who stayed in the program for over two years compared to those who stayed in for six months. This increase is substantially more than that of inflation and is possibly related to the ability of families to maintain their jobs and increase their skills. It is likely that the availability of child care contributes to the increased economic independence of these families.

The graph following shows the increase of the monthly average income compared to months in the program.



2. The average tax increase per month showed the same direct relationship to length of stay in the program as did monthly income. The average taxes increased six-and-a-half times when families who stayed in the program over two years are compared to those who stayed in for at least six months. It would be of interest to follow these families over

a longer period of time to see how long they need subsidized services and if the average tax increase continues to go up. The following graph shows the increased taxes compared to months in the program.



3. The monthly income and tax increase for a family rise substantially faster than the charts on pages 17 and 18 indicate because the values plotted are averaged over the whole time period. These increases for families staying in the program more than two years may rise almost twice as fast as the average.

D. Offsetting the Cost to Government of Subsidized Child Care

1. Participant Offset

$163,565, or 17.5% of the cost ($935,450) to the government is offset because of the

decrease in the costs of public assistance, the increase in income taxes, the increase in sales taxes, and the increase in parent fees. This offset can be used to serve 58 additional full-time children for a year at no additional cost to the state.

2. Direct Child Care Jobs and All Indirect Job Offsets

The 58 direct child care jobs together with all indirect jobs resulted in income and sales tax offsets of another $253,900, or 27%, of the total program cost.

It is well documented that as each new person is employed in a community a ripple effect takes place through increased manufacturing, trade and services. The income resulting from this expansion of the economy results in increased taxes for the government. We note that the increased taxes paid by businesses has not been included in the total offsets calculated above.

E. Results for Those Seeking Employment

Thirty families were subsidized while they were seeking employment. Of these 30 families, 25 or 84% found jobs. The program is seldom able to serve families seeking employment because the eligibility criteria gives priority to families already employed. While the numbers are small, the results are significant enough to warrant further attention.

VI. CONCLUSIONS

This study shows that the economic impact of providing subsidized child care services is far beyond the dollars allocated in the state budget. The cost of quality care is not cheap; however, when a careful analysis is made of the increased taxes that can be assessed, of the reduced welfare costs, the increased ability of families to shoulder a share of the costs, and the gross employment multiplier, the cost to the state is found to be substantially reduced.

Not only does the state get a return for their expenditures, but the subsidized families also get a return. They are able to substantially increase their economic level and, thereby, become contributing members to the state's economy. The families that use child care services are those who do not want to remain on public assistance and be supported by the state. They want instead to become able to support themselves and be economically independent. Their earned income also generates further income throughout the community.

It is time for government policy makers to look at the cost benefit ratio of providing child care services so that they will understand that child care is in fact a cost effective use of public funds.

VII. ACKNOWLEDGEMENTS

The authors wish to express their appreciation to Donald Miller and Robert Freis for their advice in experimental design, data analysis and other technical assistance.

VIII. APPENDIX

We present here the mathematical equations used to calculate the cumulative increases or decreases discussed in part C, section 2.

For each family we define the total increase or decrease for any particular quantity by equation 1.

$$X_T = \left[\sum_{i=1}^{IMAX} X_i + R\,(X_{IMAX})\right] 6 - (\text{Months in Program}) \times X_1 \qquad (1)$$

Where

IMAX = Integer part of $\{$(Months in Program)/6$\}$
R = (Months in Program)/6 - IMAX
X_i = the appropriate monthly data for that family at its i'th recertification

The first term of equation 1 represents the total cumulative value and the second term (with the minus sign) represents the cumulation of the entry level value.

For each family, we define X_A, the average monthly increase or decrease for any particular quantity by equation 2.

$$X_A = X_T/(\text{Months in Program}) \qquad (2)$$

Where

X_T was defined in equation 1.

For each quantity, we define X_{TP}, the program total increase or decrease by equation 3.

$$X_{TP} = \sum_{J=1}^{JMAX} X_{Tj} \qquad (3)$$

Where

JMAX = Total number of families in study (295)
X_{Tj} = X_T from equation 1, for the j'th family.